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SELECTING THE CLEANUP STRATEGY UNDER SUPERFUND FERNALD ENVIRONMENTAL MANAGEMENT PROJECT OCTOBER 1993

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FACTSHEET

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FERNALD
Environmental Management Project

INTRODUCTION

Several federal laws guide environmental restoration at the U.S. Department of Energy's Fernald site, but the primary one is the **Comprehensive Environmental Response, Compensation and Liability Act** (CERCLA) of 1980, or Superfund. In 1986, Congress reauthorized CERCLA as the **Superfund Amendments and Reauthorization Act** (SARA). Superfund requires extensive public involvement in decision-making under a well-defined set of activities and schedules.

The cleanup process is dynamic and flexible, tailored to the specific circumstances of each site. As information about the nature and extent of the contamination at a site is gathered, possible cleanup alternatives are identified. The goal is to make and support an informed decision on the best cleanup option. The goal is to protect the safety of human health and the environment.

The Superfund Process

CERCLA consists of three phases:

1) a preliminary assessment,

a thorough study of the site, evaluation of alternatives and selection of a remedial action plan, and

3) design and implementation of the plan.

The second phase is known as the Remedial Investigation and Feasibility Study (RI/FS). The RI/FS has several phases.

The first stage involves planning. The next step is the remedial investigation portion of the cleanup, during which extensive sampling and analysis activities are conducted. The feasibility study, performed simultaneously, develops a range of cleanup alternatives based on the sampling and other data.

Developing and Screening Alternatives

Cleanup alternatives are developed by examining how existing technologies might be applied to a specific condition at a site. This process consists of six general steps:

- ☐ Establish remedial action objectives
- ☐ Develop general response actions -- such as excavation, containment, etc. -- for each type of contamination, treatment, excavation, pumping or other actions
- ☐ Identify volumes or similar areas of contamination in which general response actions might be applied
- ☐ Identify and screen the technologies applicable to each general response action to eliminate those that cannot be done
- ☐ Identify and evaluate options based on effectiveness, relative cost, and whether they are practical or possible
- ☐ Proceed with a detailed analysis of alternatives

As part of the screening process, alternatives are analyzed to determine how well they will combine to protect the entire site.

This approach is designed to provide decision makers with sufficient information to adequately compare the alternatives, select an appropriate remedy and justify that decision.

Once all potential alternatives have been developed and screened, the remaining options are evaluated in detail according to nine evaluation criteria developed by EPA. The alternatives are analyzed individually against each criterion and then compared to one another to determine their respective strengths and weaknesses and to identify the key tradeoffs that must be balanced for that site.

Under the nine criteria, alternatives must:

- ☐ Protect human health and the environment
- ☐ Meet all applicable or relevant and appropriate requirements
- ☐ Have long-term effectiveness
- ☐ Reduce toxicity, mobility or volume of the contaminants
- ☐ Have short-term effectiveness
- ☐ Be implementable
- ☐ Be cost-effective
- ☐ Have state acceptance
- ☐ Have community acceptance

When the evaluation process is complete, the recommendation -- or *preferred alternative* -- is published in a document known as a Proposed Plan. After the public and regulators have commented on the proposed plan, a Record of Decision is prepared. A Record of Decision is the document that explains which cleanup alternative will be used.

Major Superfund Documents

The public has many opportunities to comment on cleanup and waste management decisions throughout the Superfund process. DOE welcomes public comment on all its documents. But at various stages in the Remedial Investigation and Feasibility Study process, public input is sought on proposed cleanup activities.

When documents are available, an advertisement is put in the legal notice section of the *Cincinnati Enquirer*, the Hamilton *Journal News*, and *The Harrison Press*.

The major reports coming up are:

September 10, 1993 -- Operable Unit 4 Feasibility Study/Proposed Plan

October 12, 1993 -- Operable Unit 1 Remedial Investigation/ Baseline Risk Assessment

February 18, 1994 -- Operable Unit 2 Remedial Investigation/ Baseline Risk Assessment

March 7, 1994 -- Operable Unit 1 Feasibility Study/Proposed Plan

April 29, 1994 -- Operable Unit 2 Feasibility Study/Proposed Plan

June 10, 1994 -- Operable Unit 4 Record of Decision

June 24, 1994 -- Operable Unit 5 Remedial Investigation/Baseline Risk Assessment

November 6, 1994 -- Operable Unit 1 Record of Decision

November 16, 1994 -- Operable Unit 5 Feasibility Study/Proposed Plan

January 5, 1995 -- Operable Uni 2 Record of Decision

March 28, 1995 -- Operable Unit 3 Initial Screening of Alternatives

July 3, 1995 -- Operable Unit 5 Record of Decision

March 13, 1996 -- Operable Unit 3 Remedial Investigation/Baseline Risk Assessment

August 7, 1996 -- Operable Unit Feasibility Study/Proposed Plan

April 2, 1997 -- Operable Unit 3 Record of Decision

The public may comment on any part of a document, from the proposed action to the amount of jargon it contains. If you feel you need more information in order to comment on a document, call:

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